

# **GREAT EXPECTATIONS, MIXED RESULTS:**

Standards and Performance in Denver's New Public Schools

2007-2011



"Great Expectations, Mixed Results: Standards and Performance in Denver's New Public Schools 2007-2011"

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**Note:** an initial draft of this report included profiles in Appendix A for only the schools that had a direct continuum between a prior and new version. Based on reader feedback, we have expanded this section to include profiles for all 32 of the new schools still operating in 2011. We also made minor changes to the text to be consistent with this addition.

The Donnell-Kay Foundation is a non-profit 501(c)3 family foundation that supports improving public education in Colorado. The Foundation has provided grant money to support a number of programs at Denver Public Schools as well as direct support of several schools mentioned in this report. Members of the Foundation staff serve in an advisory capacity to numerous organizations and hold positions on the boards of charter schools that were part of this analysis.

### **Executive Summary**

Over the past five years, a total of 36 new public schools have opened in Denver. Although data on their performance is both early and limited, the strategy of opening new schools appears to have led to some overall improvements in student academic growth. However, not all types of schools have done equally well, and some have done uniformly poorly.

There are early indications that certain new school models in Denver offer a promising opportunity for both meaningful and substantial academic gains, while others – particularly redesigns of schools with a long legacy of poor performance – display all too well the difficulty of escaping the gravitational pull of chronic underachievement. The district's strategy needs to set standards for new schools up front, incorporate data on school performance, and evolve quickly toward models that consistently show academic growth well in excess of the average public school in Denver.

Should a new school be compared only to a program it replaces? Or is the intent of opening new schools to offer a level of academic achievement far better than what is currently available?

Denver Public Schools (DPS) does not currently set advance standards or expectations for the performance of new schools. Metrics and measurements of new schools are often applied in different ways, with an exceedingly wide brush, and generally well after the results are already known. The lack of consistent standards and metrics undermines the strategy and promise of opening new schools. Should a new school be compared only to a program it replaces? Should it perform at a level equal to district or state averages? Or is the intent of opening new schools to offer a level of academic achievement far better than what is currently available?

The inability or disinclination to set reasonable standards and expectations for new schools may have been understandable in the initial years of new school development, but that time should now pass. In opening any new school, the district should determine multiple measures and targets, and then judge success (or failure) based on performance

over time against this set of criteria. Without predetermined and accepted performance standards and targets, claims of

either district success or failure are likely to be seen as arbitrary or political, and may undermine legitimate achievements of both specific schools and potentially of the entire strategy.



### Introduction



In conjunction with the Denver Plan instituted in 2005, Denver Public Schools (DPS) has embarked upon a consistent strategy of opening new schools in an effort to improve overall academic performance. DPS has pursued this strategy under several different paths: an annual request for proposals from charter school applicants; allowing current schools to pursue innovation status under Colorado's 2008 Innovation Schools Act; and the redesign — usually including significant changes to both personnel and curricula — of chronically underperforming schools. This approach — a mix of new charter, innovation, and redesign schools — has been part of a gradual district shift from a centralized administration with operational control of all schools, to district oversight of different types of schools with a variety of both governance models and autonomy.

However, in the laudable push to create better academic outcomes through the introduction of new schools, there has been remarkably little public discussion of the appropriate standards and metrics for those outcomes. Is the expectation for a new school simply that it should perform better than any school it replaces? Should the new school be considered a success only if it has higher performance than the respective DPS or state average? Or given the considerable time and money spent on their behalf, should new schools be held to an altogether higher standard, particularly since average performance in DPS was a genesis for reform efforts in the first place?

The need to establish expectations and metrics for new schools is amplified by the current and ongoing low rates of academic proficiency in many of Denver's neighborhoods. On average in 2011, just 44% of DPS students were reading, writing, or performing math at grade level. Proficiency peaks in 6th grade at just 50%. The lowest result is in the grade last measured, as just 33% of students are proficient in 10th grade. To give Denver's students the skills necessary to succeed in career or college, it is imperative that our public schools improve by not just a little bit, but by a lot.

Thirty-six new schools have been initiated in Denver in the past five years and have academic growth data for their students, but these schools have been compared differently, under varying criteria and against disparate data sets, with little strategic attention or acknowledgement of which programs or school types are improving, which are seeing the substantial increases in performance, and which are falling short. We believe it is time to begin to disaggregate and untangle this mix of new schools and both establish and report on new school performance.

Currently, the DPS School Performance Framework (SPF) measures all public schools in Denver. However, standards for new school performance are not set based on the SPF, nor is the framework used as a consistent measure of their success. Indeed, the majority of new schools created in the past five years are in the lower half of the 2011 SPF, and three are among the bottom ten, a record that does not generally match the rhetoric around their performance.

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We do not intend to suggest a full set of appropriate measurements here, and we believe it is the purview of the district and school operators to create standards and metrics for new schools. We do hope to invigorate and inform a more complete discussion about what those metrics should be through a focused analysis of academic growth of all new schools in Denver created over the past five years. To the best of our knowledge, while there has been public data on individual school performance and selective school types, there has been little analysis of the full range of new schools opened over the past five years, their performance trends over time, or any attempt to measure their collective impact and disaggregate their performance.

For this paper, we measure the academic growth of every newly created school in Denver that commenced operations between 2007 and 2011 by examining their median growth percentile (MGP). Median growth percentiles, calculated by the Colorado Department of Education, measure the annual academic progress of student cohorts on the CSAP test and are, in our belief and despite their limitations, the best available measure of student academic growth across different schools and different years.

This paper examines the academic performance of these new schools both as a group and segregated by school type (charter, innovation and redesign). The data in this analysis is based on a small sample over a limited period of time and is neither conclusive nor definitive. But, we need to examine the evidence we have — limited as it may be — in order to begin to forge a deeper understanding of what is and what is not yielding improved academic outcomes precisely because policymakers and practitioners are consistently faced with the necessary evil of decision-making under uncertainty.

Our primary recommendation is simple: in advance of any new school (and annually for existing schools), determine the appropriate set of metrics under which to judge performance. Then do more of what works. Do less of what does not.

However, even this simple rubric is impossible without some consensus on the appropriate standards and performance measures in Denver's new schools and an examination of their results to date. Those who fail to learn from history are said to be doomed to its repeat. Extending the historical low performance of Denver's schools is a fate that their students cannot afford

We hope that this analysis will be only the first of multiple efforts that help delineate the performance of Denver's new schools. A longer discussion of methodology and a list of the specific schools in this study are attached in an appendix.



### **Primary Observations**

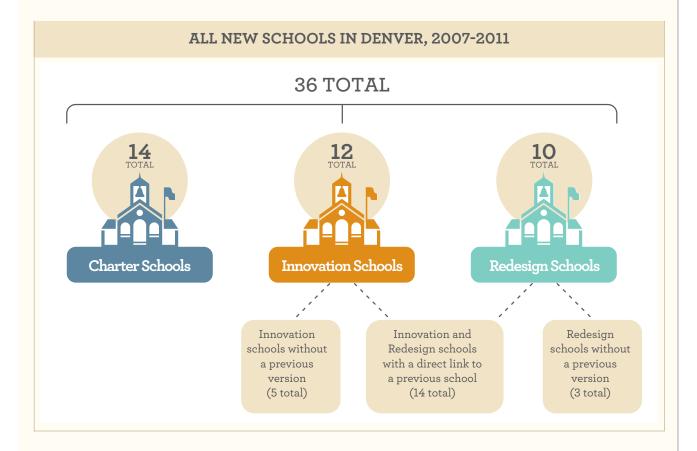
- Success should be foresight, not hindsight: It is critical that performance standards for new schools be
  established well in advance of results: the district should only open new schools accompanied by clear and defined
  metrics and expectations for success. While the data around new school performance will likely continue to be
  fragmented and indefinite, the lack of cohesive standards undermines the central effort to improve academic
  outcomes.
- Strive for excellence, not improvement: Academic proficiency across Denver has historically left most students ill-prepared for the challenges of college or career. Marginal improvements will not bridge this chasm of academic preparation. The district needs to focus on creating new schools that are doing not just marginally but substantially better than average.
- Change efforts that do not work. Denver's most challenged schools, after a district redesign, virtually never outperform DPS averages. Improvements, particularly in the secondary grades, are marginal when they occur at all. These turnaround efforts need to be changed substantially or ended altogether. It is neither responsible policy nor practice to continue to devote considerable resources into the same efforts, particularly when the data, both here and nationally, continues to show that these efforts rarely yield results.
- History can be a heavy burden: Several new schools added additional grade levels to their previous model (for example, adding a high school to an existing middle school), and in almost every case, the new grades performed better than legacy grades. The improvement of additional grades often masks that the legacy grades are performing as poorly (or worse) than prior to the changes. Even in the best circumstances, it is difficult to break free from the gravitational pull of chronic underperformance.
- Initiating a transformation may itself be transforming. New schools that were transformed from a previous model had median growth percentiles that were relatively similar to the final year of operation of the former school. However, an increase in median growth often came in the year prior to the opening of the new school. This may suggest (and only suggest) that initiating a school transformation and the accompanying planning, reorganization and other activities is in itself as important as the programmatic changes. The planning process alone may drive some academic achievement, if even the trajectory is not sustained.
- Clone Quality. The enhanced performance of charter schools can be credited to an advantage that is often overlooked: the ability to replicate high-quality schools within expanding charter management organizations (CMOs). The ability of just two CMOs to expand into the operation of multiple campuses has been critical to the overall success of new schools within the district. DPS should look to replicate high-performing district schools alongside CMO expansions.

### New Schools in Denver from 2007-2011

Since 2007, Denver has seen the creation of 36 new schools. Fourteen of these are charter schools, 12 are innovation schools, and 10 are redesign schools. Four of these schools have subsequently closed or been merged into other programs, leaving 32 of these new schools still operating today.

For this report, a "new" school is considered to include charter and innovation schools, as well as redesigned schools that have undergone significant changes in both academic program and personnel subject to a vote before the Denver school board.

Of the 36 new schools, 22 are brand new, and 14 existed in a prior incarnation and then were transformed either through the application and confirmation of innovation status or as a result of a district redesign.<sup>2</sup>



The pace of new school openings has increased over the five-year period, with the majority of new schools - regardless of type - opening in the past three years.

A full list of all new schools, with their subject growth percentile scores from 2007-2011 are in Appendix D.

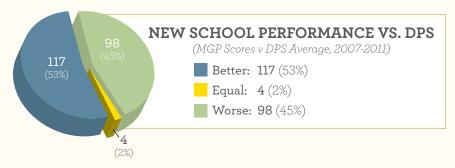
<sup>&</sup>lt;sup>1</sup> For this report, to attempt a more precise comparison, we separate schools by level (elementary, middle, and high) so that a grade K-8 or 6-12 program consists of two separate schools: respectively an elementary (K-5) and middle (6-8) school, and a middle (6-8) and high (9-12) school.

<sup>&</sup>lt;sup>2</sup>There is an additional category of "Turnaround Schools," – which are generally considered any school that has received federal turnaround monies. However these dollars can (and have) been allocated to all three types of schools, so we do not consider turnarounds a specific school type.

|                                    | 2007      | 2008                       | 2009                                    | 2010                                    | 2011                                    |
|------------------------------------|-----------|----------------------------|---|---|---|
| Number of<br>New Schools<br>Opened | 2         | 2                          | 11                                      | 8                                       | 13                                      |
| Type of<br>New Schools<br>Opened   | 2 charter | 1 innovation<br>1 redesign | 2 charter<br>4 innovation<br>5 redesign | 4 charter<br>1 innovation<br>3 redesign | 6 charter<br>6 innovation<br>1 redesign |

### II. New School Performance Compared to DPS averages

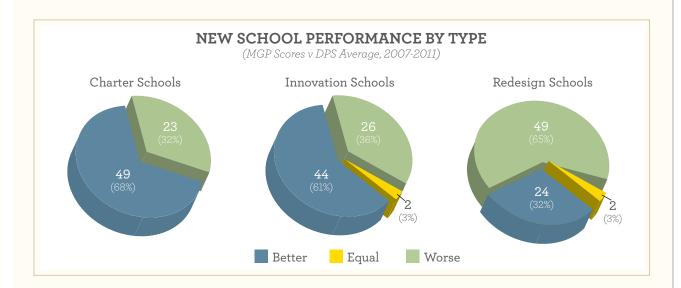
The 36 new schools in Denver somewhat outperformed district averages for academic growth during the 2007-2011 period. Examining 219 comparative growth scores in core subjects (reading, writing, math) over that time, new schools did better than their respective DPS level (elementary, middle, or high school) 53% of the time, the same 2% of the time, and worse 45% of the time.



#### Performance by School Type

Part of the strategy of initiating a variety of new schools is to see if there are significant differences in performance by type. We looked at the three types of new schools (charter, innovation and redesign) and found considerable differences.

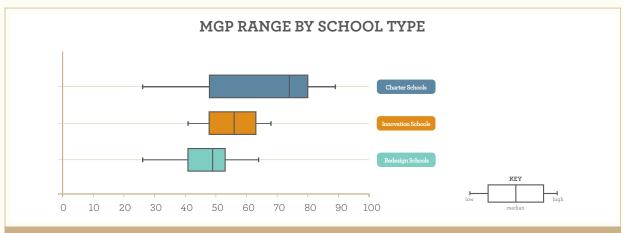
In the 2007-2011 period, compared to their respective DPS school level, charter schools posted higher subject growth scores 68% of the time. Innovation schools also outperformed the DPS median, posting higher subject growth scores 61% of the time. Redesign schools outperformed the DPS median just 32% of the time.



We also have an interest in how much variation there is within academic growth in new schools. We found considerable differences by school type.

From 2007 to 2011, the range of academic growth in core subjects (math, reading, and math) for new charter schools was 63 points (from a minimum of 26 to a maximum of 89) with a median of 74. In contrast, innovation schools saw a range of academic growth scores of 27 points (41 to 68), with a median of 56. Redesign schools had a range of 38 points (26 to 64) with a median of 49.

The chart below shows the total range, lower quartile, median and upper quartile for all three types of schools. While all school types have considerable variability, the range of charter school academic growth is almost two-thirds wider than either of the other two schools types. The median academic growth for charter schools is higher than the maximum performance of either innovation or redesign schools.



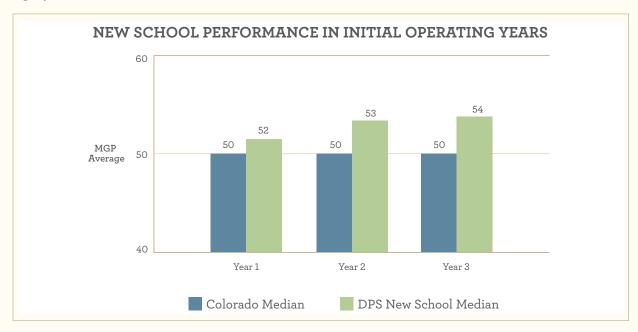
Charters can perform equally poorly to other schools, however they also have what appears to be a unique ability to achieve academic growth far in excess of other models.

### III. New School Performance over Time

We also have an interest in the progress of new schools over multiple years of operation. The data here is very limited, since many of the schools in this analysis have only a year or two of operations under their belt, and the sample size is small. With these limitations, we use a fairly blunt measurement by examining the median growth percentile score of a group of new schools compiled from different years. We compare these to the Colorado median growth percentile, which is set every year at 50.

The first year a new school was in operation is the starting point so that we could track the progress over time of all schools regardless of which year they began. As only four schools had more than three years of operational history, we focus on only the first three years of new school operations.

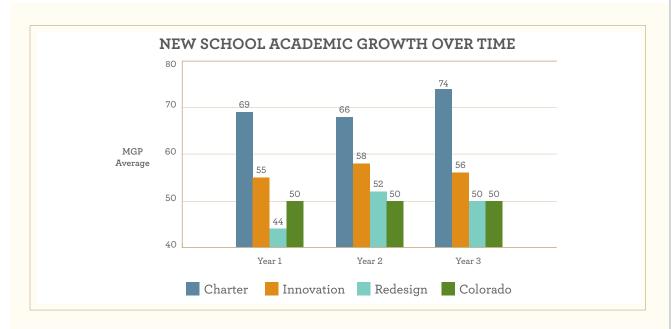
Overall, the performance of new schools exceeded the academic growth of the state. In their first year of operations, DPS's new schools had academic growth of 52, 53, and 54 respectively, above the state's score of 50, and increasing slightly as a school matures over time.



#### Performance by School Type

Looking at the performance of new schools by type on the graphic below, charter schools also had the highest performance on academic growth over time. Both charter and innovation schools consistently saw growth percentiles above the state median of 50. Redesign schools were under or about equal to the state.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> Charter schools had an MGP median of 69 in the first year (N=14 schools); 66 in the second year (N=6) and 74 in the third year (N=2). Innovation schools had a MGP median of 55 in the first year (N=12), 58 in the second year (N=6) and 56 in the third year (N=5). Redesign schools had an MGP median of 44 in the first year (N=10), 52 in the second year (N=9) and 50 in the third year (N=5). Note that the third year of operations had a greatly reduced sample size.



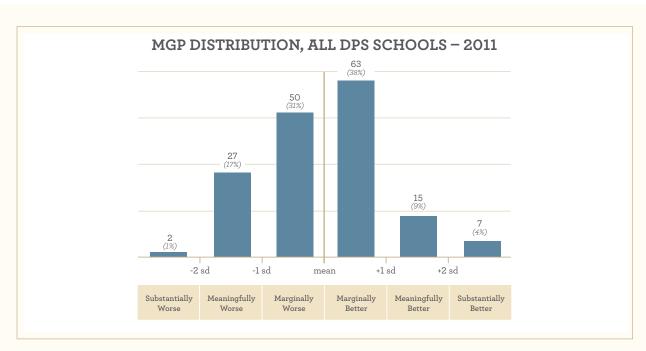
### IV. New School Performances in 2011

Of the 36 schools in this study, 32 were still in operation in 2011. We examined these 32 schools to see how they performed in the most recent year with a particular emphasis on the variation of academic growth: were there some new schools that were performing not just slightly above (or below) the DPS average but either substantially better (or worse) than almost all DPS schools?

For simplicity, we divided school performance based on MGP standard deviation from the mean (or average) into three groups: marginally better/worse, meaningfully better/worse, and substantially better/worse. $^4$ 

We looked first at all 164 DPS schools with academic growth scores in 2011. As seen in the chart below, 63 schools (38%) have been performing marginally better than the DPS average, 15 (9%) have been performing meaningfully better, and just seven (4%) have been performing substantially better. The distribution of growth percentile scores skews slightly left to lower performance: 50 schools (31%) were performing marginally worse, 27 schools (17%) were meaningfully worse, and two schools (1%) were substantially worse than average.

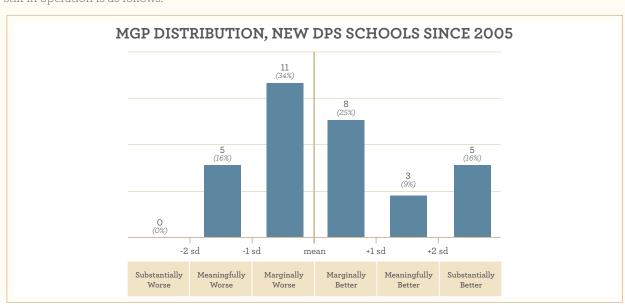
<sup>&</sup>lt;sup>4</sup> Marginal performance was a median growth percentile score less than 1 standard deviation from mean; meaningful was more than 1 sd but less than 2, and substantial was 2 sd or more from the mean.



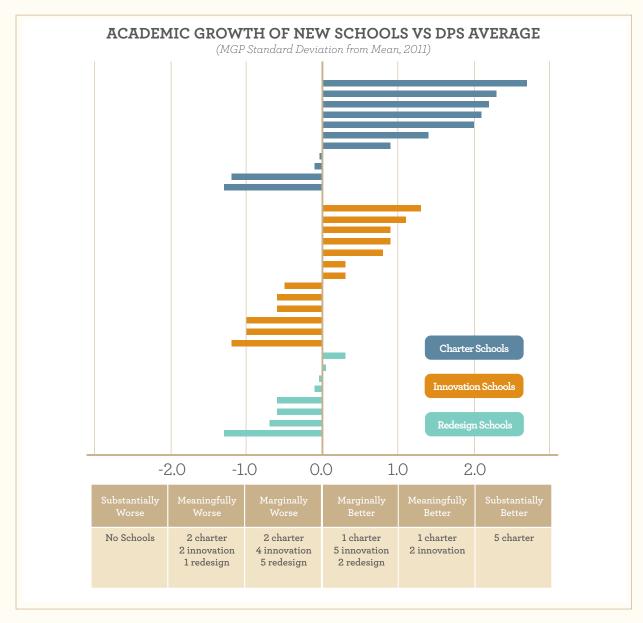
In contrast, the performance of new schools, as seen in the graph below, assumed a different distribution pattern, as it skews to higher performance. The left side of the graphic – schools that performed worse than average – is similar (although there were no new schools performing substantially worse than the DPS average).

However the right side shows overall higher performance: eight schools (25% of all new schools) were performing marginally better than the DPS average, three schools (9%) were performing meaningfully better, and five schools (16%) were performing substantially better than average.

The distribution of median growth percentile scores in 2011 for the 32 new schools that began since 2007 and are still in operation is as follows:



Looking at a comparison of each of the new schools makes this more explicit. The following graph shows how far above or below the DPS average each school scored on academic growth:



This is a remarkable finding, and shows an area of considerable initial promise for the DPS strategy of instituting new schools to lift overall academic performance. In 2011, just 22 DPS schools had meaningful or substantial academic growth compared to the DPS average. Of these 22, fully eight (36%) were new schools started since 2007. There were seven schools that showed substantially better performance on academic growth. Six of these seven schools are charters — and five began operations since 2007. <sup>5</sup> However, a cautionary note: it remains to be seen if this level of performance can be sustained, as three of the six charter schools had their first year of operation in 2011.

<sup>&</sup>lt;sup>5</sup>The sixth charter is the original DSST high school in Stapleton, which began operations in 2004.

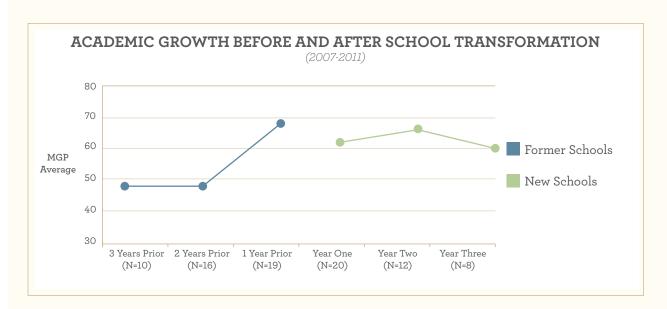
# V. Legacy School Transformations

Many new schools existed prior to either the designation of innovation status or the structural changes inherent in a district redesign. Of the 22 innovation and redesign schools in our sample, there are 14 schools where there is a direct continuum from a previous school. We refer to the change from a previous design to a new school as a legacy school transformation.

Comparison of new schools to the legacy schools they replaced is admittedly somewhat speculative: the transformation process is often a continuum across several years and is difficult to divide into discrete periods before and after a specific point in time. Particularly with innovation schools, the process of the transformation often began well in advance of when innovation status was officially awarded. However, we believe the comparison between former and new schools is both valid and constructive, and we try to provide ample context whenever possible.

Academic growth for the 14 schools saw an overall improvement: eight schools had higher scores after the transformation; two school saw a decline in scores, and four schools were virtually the same.

However, the greatest improvement in median growth percentiles came in the year *prior* to any transformation. This trend was evidenced in both innovation schools (which start planning well in advance of the conferring of innovation status and require a supermajority of faculty to approve) and redesign schools (where the transformation often takes place against the desire of many of the faculty, who are often then replaced).



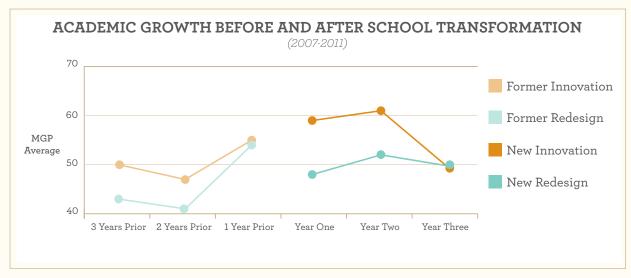
<sup>&</sup>lt;sup>3</sup> Charter schools had an MGP median of 69 in the first year (N=14 schools); 66 in the second year (N=6) and 74 in the third year (N=2). Innovation schools had a MGP median of 55 in the first year (N=12), 58 in the second year (N=6) and 56 in the third year (N=5). Redesign schools had an MGP median of 44 in the first year (N=10), 52 in the second year (N=9) and 50 in the third year (N=5). Note that the third year of operations had a greatly reduced sample size.

It would appear that the act of initiating a transformation may itself have been enough to drive some academic improvement. There is some rationale for this hypothesis. One might suggest that – particularly with innovation schools – the cultural shift and determination that accompany transformation efforts have a substantial impact over and above the actual reforms that accompany an approval.

However, on a somewhat anecdotal view on individual school performance, the initial improvement that often accompanies the decision to change does not appear to continue its trajectory after the transformation. Overall improvements were generally modest, a pattern which was largely consistent across different individual schools.

There was a significant difference by school type: five of seven innovation schools improved, one declined, and one was unchanged. For redesign schools, more often than not transformation failed to result in an improvement in growth percentile scores, as three schools saw their scores rise, one declined, and three were unchanged.

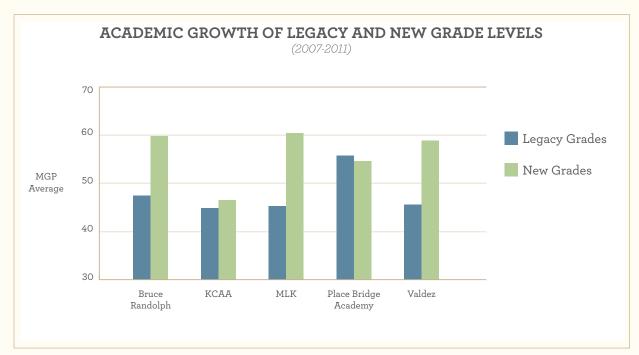
The spread between where each school began and ended was relatively consistent both before and immediately after the transformation, regardless of school type. Redesign schools both began and ended with lower academic growth than innovation schools.



For redesign schools, generally the poorest performers prior to transformation, median growth percentiles above the district average were an elusive goal. When these schools saw an improvement, they merely edged closer to average performance – in a district where average is generally viewed as less than optimal. This data is consistent with national studies that have regularly shown that turning around schools that suffer from a historical record of low performance is remarkably difficult.<sup>6</sup> While it may be unrealistic to expect DPS to achieve substantial improvements in an area where success has so frequently and consistently proven elusive, it would compound the folly to continue transformation attempts in the same vein.

#### Legacy vs. New Grade Levels

The idea that schools with chronically low levels of performance are difficult to improve is not novel. However, we found an additional interesting facet in the analysis of new school performance. There were five schools (three innovation and two redesign) that added additional grade levels between 2007-2011. Of these five schools, four saw enhanced performance on academic growth in the new grades (with substantial differences in three schools). The fifth school saw a slight decline in growth percentile performance in the new grades compared to the legacy grades.



This is inchoate data. However it does prompt additional speculation that the gravitational pull of a chronically underperforming school continues to disproportionally weigh down academic results in legacy grades even after a transformation. It is unclear if this trend is the result of legacy culture, personnel, programs, resources, or other factors, but it offers some additional support to the belief that legacy programs resist substantial improvements, and it may well be easier to start a new school (or new grades) from scratch than to transform schools with a long history of underperformance.

This data also shows that reporting aggregated metrics in the schools adding additional grades distorts a true comparison of their performance. Academic gains — when present at all — are often the result of higher performance in the new grade levels. An apples-to-apples comparison of the same grades before and after a school transformation shows less evidence of improvement. A more complete examination of each individual school still in operation follows in Appendix A.

# ${ m VI.}\,$ Impact of the Charter School Networks

The data in this analysis shows that charter schools outperformed other new school models on student academic growth and were the sole new school model to show substantial gains far in excess of the district average. This should be unsurprising, as other studies examining the performance of Denver's charter schools have drawn similar conclusions.

Autonomy and flexibility in the charter model appear to grant the freedom to both succeed and fail to a large extent (as seen in the wide range of median growth percentile scores). However the primary advantage to districts may be the unique ability of charters to replicate schools that are of high quality.

The 14 charter schools in this study include six schools from two high-performing networks: West Denver Prep, and DSST Public Schools.<sup>8</sup> Two schools have expanded into six, increasing their impact three-fold. If one were to take these two networks out of the results, the remaining charter schools were largely undistinguished, and their academic growth would drop under the state average.

Replication is a skill like many others and is somewhat implicit in the charter model due to both the higher degree of autonomy from school districts and independent governance. In contrast, it is notable that the best district schools in Denver do not replicate — they remain stand-alone entities. Currently, there is a single district school (Denver Center for International Studies, or DCIS) attempting a replication, but with an important distinction in enrollment as the initial DCIS campus is a magnet school, while the new campus is not.9 No other district school has tried to replicate as part of the new school process.

The implications here are clear: a single outstanding charter school can beget additional high-quality schools. This suggests that the district should both leverage high-performing charter schools, but more importantly, they should look to develop high-performing district schools into replicable models as well.

# VII. New School Demographics

Overall, the new schools had a higher percentage of students in poverty as measured by free and reduced lunch status (FRL) than the DPS average. On a weighted average basis, the new schools still in operation in 2011 had 84% FRL, substantially higher than the DPS average of 72%.

The percentage of FRL students varied by school type. Redesign schools had the highest percentage of FRL students at an average of 91%. Innovation schools were also higher than the district average, with an average of 85% FRL students. Charter schools were virtually even with the DPS average at 73% FRL.

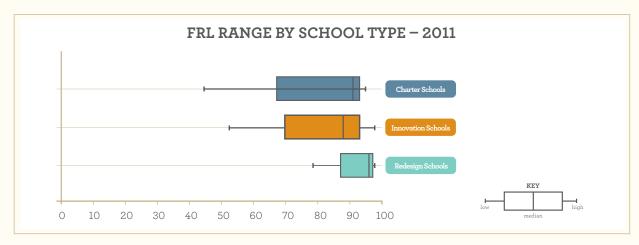


 $<sup>^{7}</sup>$  This includes the 2009 CREDO study as well as the 2012 A+ report on the impact of charter schools in Denver.

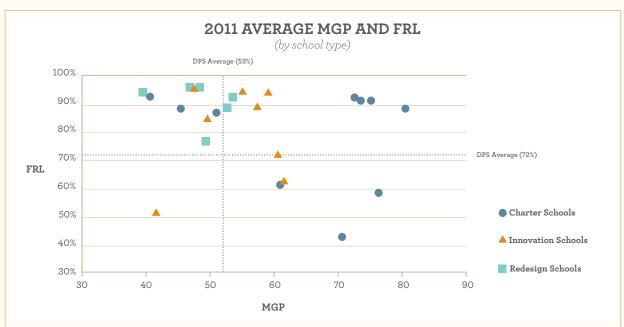
This includes all four WDP middle schools, as well as the DSST middle schools at both Stapleton and Green Valley Ranch, but not the DSST Stapleton high school, which began prior to 2007.

DCIS is opening two new campuses in FNE Denver: one a replication of the existing school serving grades 6-12, the other a new school serving elementary grades.

In 2011, the redesign schools were far more concentrated in their demographics, as all schools had higher FRL than the district average. Both innovation schools and charter schools showed a wider range: innovation schools varied from 49% to 98% FRL, while charter schools varied between 44% and 94% FRL students.



Does a higher FRL population impact academic growth? The chart below compares median growth percentile with the percentage of FRL students by both school and school type. There is clearly a correlation, however it is less pronounced than the district overall. However all four schools in the top right hand quadrant (with academic growth above 70 and FRL above 90) are from the West Denver Prep charter network. Without this network, the correlation would be far higher.



The challenges of serving high-poverty populations remains, however there are examples of schools having some success: among the 32 new schools still in operation, about a third have both FRL populations above 80% and academic growth higher than the state.

 $<sup>^{\</sup>scriptscriptstyle 10}$  The R2 of the linear regression in new schools is 0.05429, in DPS overall it is 0.10045

# VIII. The Future of New School Development

Last year, Far Northeast (FNE) Denver became the locus for new school development, as an initiative yielded 11 new schools — including charter, innovation and redesign schools — in a relatively small geographic area, while several existing schools were phased out or closed. Fueled in part by over \$10 million in philanthropy and federal grants to the newly named Denver Summit Schools Network (DSSN, which includes innovation and redesign schools, but not charters), this is without doubt the most ambitious step yet in Denver's attempts to make broad and significant improvements to its public school system through a strategy of creating new schools.

These new schools will conclude their inaugural year in a few months, yet there has been little public discussion of the expected academic and other outcomes. Under what criteria will these new schools be considered on track to success? Will any have the warning signs of potential failure? What are the academic growth and proficiency goals for their students? Without ample discussion and specific criteria, the ability to rationally and objectively determine if the strategy of opening new schools is working — and if so, how it might be improved —is unlikely.

There have been vague and underwhelming assurances on the performance of the FNE schools, including a news article and subsequent Board presentation<sup>11</sup> where the district shared initial assessment data showing academic progress of the DSSN. This assessment data compared these schools not to their previous models, nor to the average district school, nor against overall district performance, but instead to an unreferenced "cluster."

This cluster, it turns out, consists of unspecified schools composed of students with similar previous student achievement and growth scores – in other words, the progress of new Summit Schools was judged solely by comparison to other schools with a long history of poor performance.

While this measurement is valid, it is also deeply insufficient. One does not measure the health of a patient by comparing them only to the most chronically ill. Indeed, it is hard to imagine that the district would look favorably on a charter or innovation applicant with aspirations to merely do better than the worst performing schools in the district. And it is abundantly clear that creating new schools that perform just marginally better than the worst district schools will not be enough to lift academic proficiency and create students that are career and college ready. Before we declare new schools a success, our standards — and results — must be higher.



<sup>&</sup>lt;sup>11</sup> See "Denver turnaround schools show 'unreal' improvement in students' math scores" <a href="http://www.denverpost.com/news/ci-19984124">http://www.denverpost.com/news/ci-19984124</a>, and pages 33-36 of the DPS Board presentation on 2/16/2012.

# IX. Conclusion

Denver Public Schools and the overall education reform movement have long advocated the use of data to both measure and improve school performance. The inability to be more clear and transparent about the intended performance of new schools does little to assuage concerns that these initiatives are acting on caprice and hindsight instead of planning strategically and cohesively.

If opening new schools — particularly with concentrated regional efforts such as the Denver Summit Schools Network — remains a primary district strategy, it should now move into a new phase where multiple metrics including both academic and non-academic measures are identified for each school prior to opening, and the success of these schools (and of the overall strategy) measured against these metrics.

The initial phase of deploying new schools in Denver appears to be yielding some promising results based on increases in student growth percentiles. New charter schools have a wide range of performance, but the best have shown academic growth substantially in excess of district averages. The replication of high-performing charter networks appears to have a considerable positive impact, at least in the short term. Innovation schools are, generally speaking, doing better than the schools they replaced and marginally better than average district schools.

However, not all new schools are above average – nor are they making enough growth to catch students up to a necessary level of proficiency. Redesign schools appear to have seen little to no improvement on student growth percentiles in legacy grades, and the continued use of redesigns should be closely monitored to see if these efforts should be continued at all — particularly on the scale of the changes in FNE.

Determining advance performance standards and criteria for new schools will give considerable credibility to those schools that successfully meet or exceeds the metrics. The district should determine which efforts are working and which are not, and then to adjust its strategy accordingly.



Following are individual profiles of each of the 32 schools still operating in 2011.

For the 14 schools that existed in a prior incarnation and then were transformed either through innovation status or a district redesign, we compare the prior and new versions.

When available, we gauge performance on median growth percentile compared to the former school (schools were considered unchanged if their average median growth percentile after a transformation was within 2.5% of the score prior to the transformation). We also compare growth subject scores to the DPS school-level average, list the distribution and standard deviation of the average 2011 growth percentile score, and list subject and average results for both growth and proficiency for 2011 with a comparison to the DPS school-level average.

#### Redesign Schools (9 total):

- Gilpin (elementary school)
- · Greenlee (elementary school)
- Trevista (1 elementary and 1 middle school)
- Kunsmiller Creative Arts Academy (1 elementary and 1 middle school)
- · Lake International (middle school)
- Place Bridge Academy (1 elementary and 1 middle school)

#### Innovation Schools (12 total):

- Bruce Randolph (1 middle and 1 high school)
- · Cole Academy of Arts and Sciences (1 elementary and 1 middle school)
- · Denver Green School (elementary school)
- · Manual (high school)
- Martin Luther King (1 middle and 1 high school)
- · Montclair (elementary school)
- · Valdez (elementary school)
- · Whittier (1 elementary and 1 middle school)

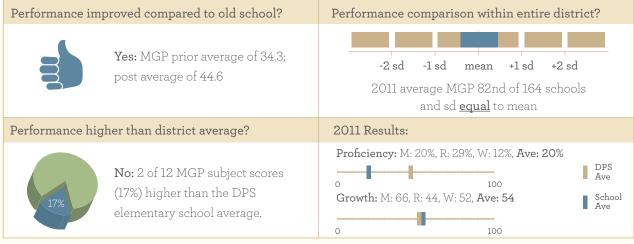
#### Charter Schools (11 total)

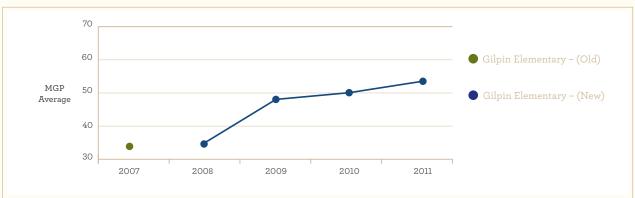
- DSST: Green Valley Ranch (middle school)
- DSST: Stapleton (middle school)
- · Girls Athletic Leadership Academy (middle school)
- KIPP Collegiate (high school)
- · Manny Martinez (middle school)
- West Denver Prep: Federal (middle school)
- · West Denver Prep: Harvey Park (middle school)
- West Denver Prep: Highland (middle school)
- · West Denver Prep: Lake (middle school)
- · Venture Prep (1 middle and 1 high school)

### Gilpin

#### Redesign School

The DPS Board began a restructuring effort that led to Gilpin reopening as a Montessori program in the 2007-2008 school year. Due to persistently low proficiency scores, Gilpin was approved as a turnaround school in 2010 making it eligible for federal turnaround dollars.

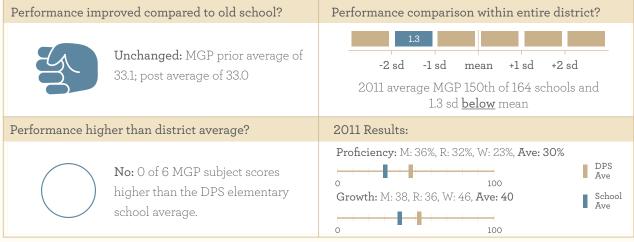


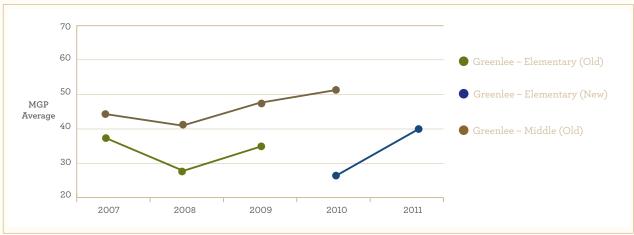


### Greenlee

#### Redesign School

In November of 2009, the DPS Board approved Greenlee for turnaround status and voted to eliminate the middle school.

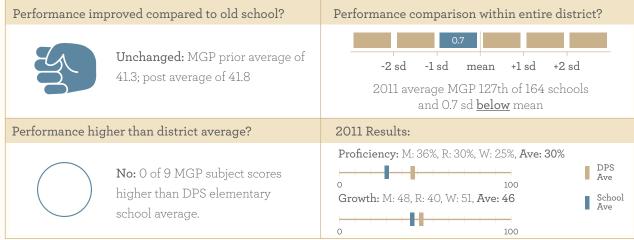


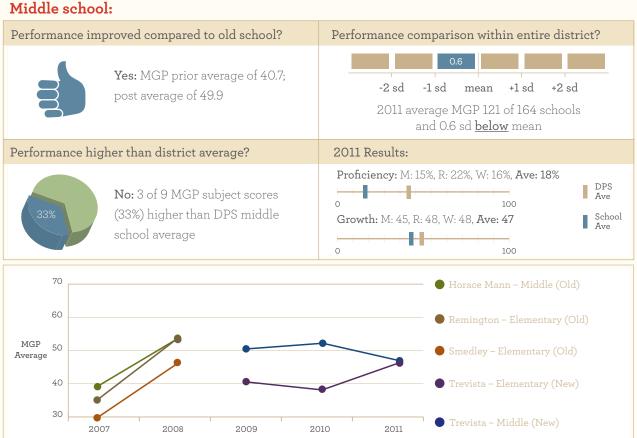


#### Trevista

#### Redesign School

Trevista was formed through the closure of both Horace Mann (middle), Smedley, and Remington (elementary) schools. It opened in the 2008-2009 school year.

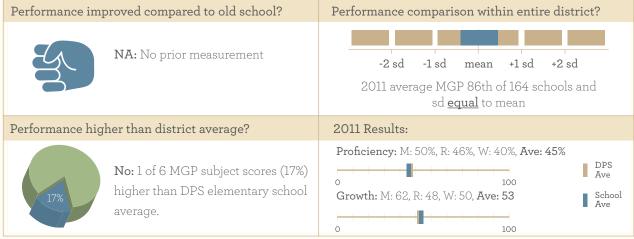


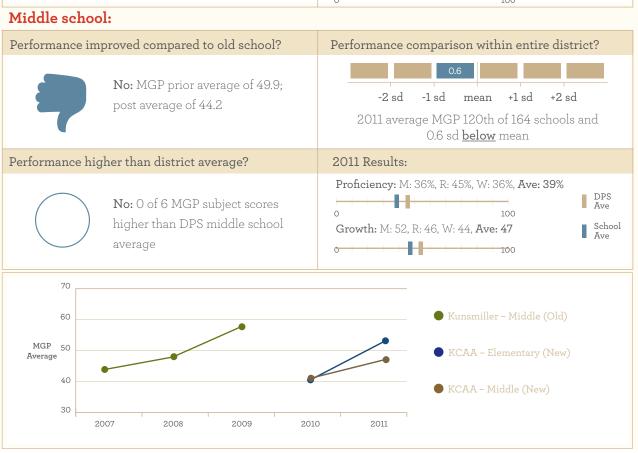


#### KCAA

#### Redesign School

The former Kunsmiller middle school underwent an extended planning process before adding an elementary school and reopening as Kunsmiller Creative Arts Academy (KCAA), with an integrated arts curriculum. KCAA will further expand into a high school in the fall of 2012.



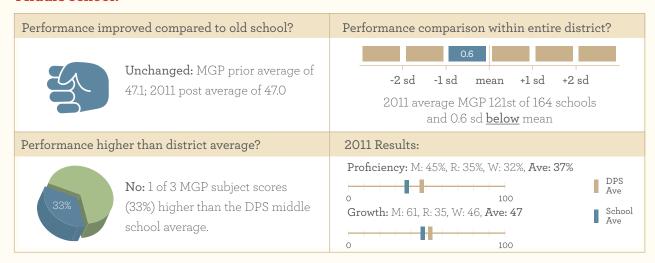


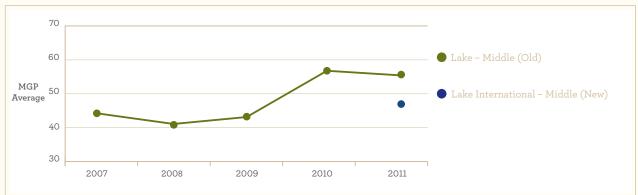
#### Lake International

#### Redesign School

Lake became an authorized IB program in August of 2008; in November of 2009, the DPS Board approved a re-start and turnaround (including federal turnaround dollars). Lake International was opened in the 2010-2011 school year, and the existing Lake Middle School is phasing out.

#### Middle school:



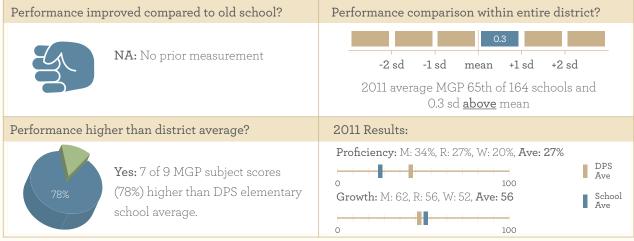


#### Place Bridge Academy

#### Redesign School

Place Bridge middle school added an elementary school and reopened as Place Bridge Academy in the 2008-2009 school year.

#### Elementary school:



MGP

Average

50

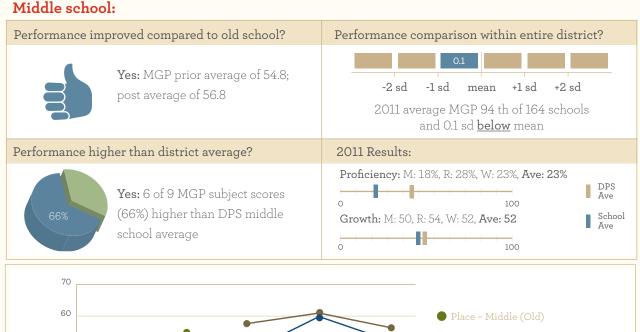
40

30

2007

2008

2009



2010

2011

Place Bridge – Elementary (New)

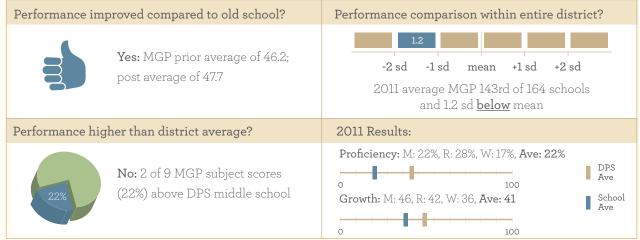
Place Bridge - Middle (New)

### Bruce Randolph

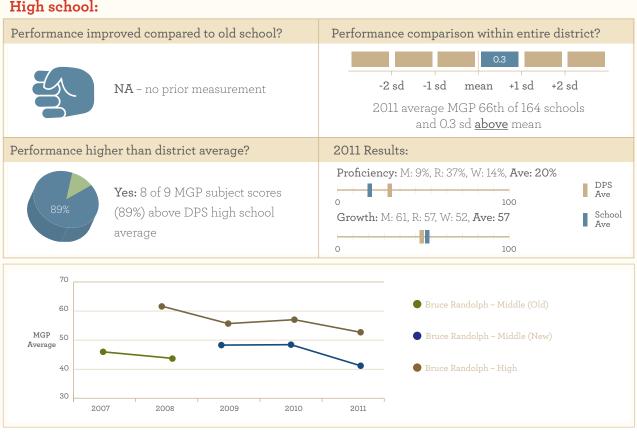
#### Innovation School

Bruce Randolph petitioned the District for independence from certain district and union requirements after a supermajority faculty vote, and added high school grades in 2007-2008. While generally considered an innovation school, they did not pursue formal innovation status after securing autonomy in February 2008.

#### Middle school:



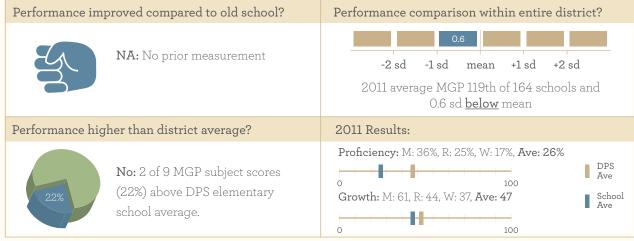
#### High school:

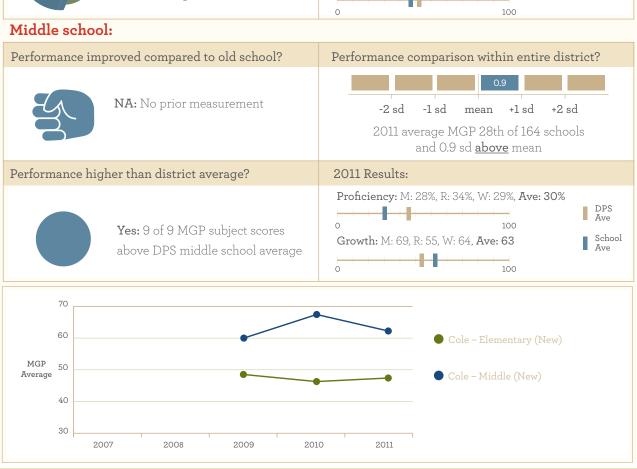


### Cole Academy of Arts and Sciences

Innovation School

Cole (also known as CASA) received innovation status in August of 2009. Cole had several changes prior to that date, so we do not compare it to an earlier version.

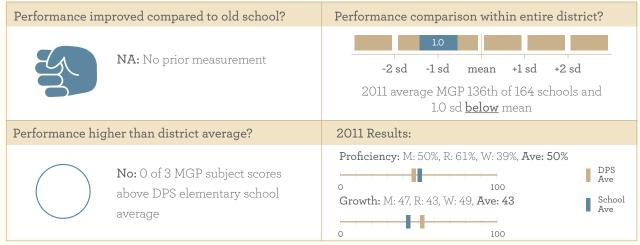


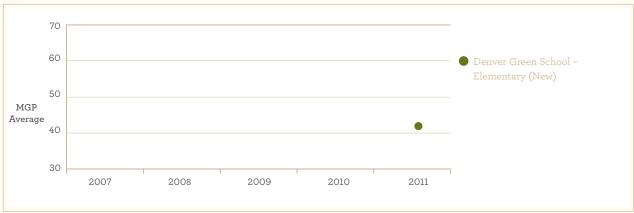


#### Denver Green School

#### Innovation School

The Denver Green School received innovation status in April 2010 and opened in 2011 in Southeast Denver.



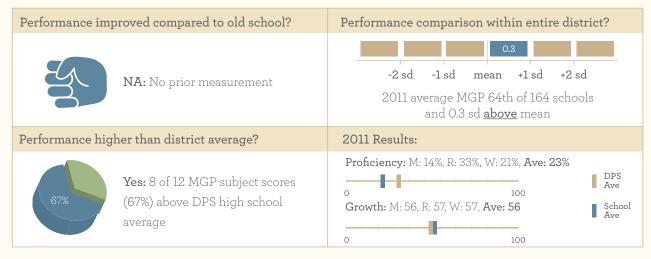


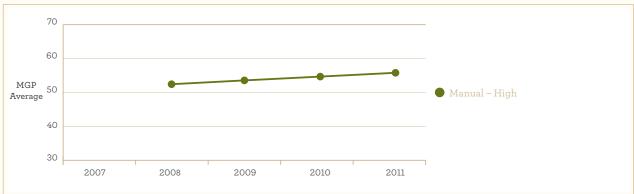
#### Manual

#### Innovation School

Manual has had numerous incarnations over the past decade, so we do not compare its prior history to its current performance. Manual received innovation status in March of 2009.

#### **High School:**



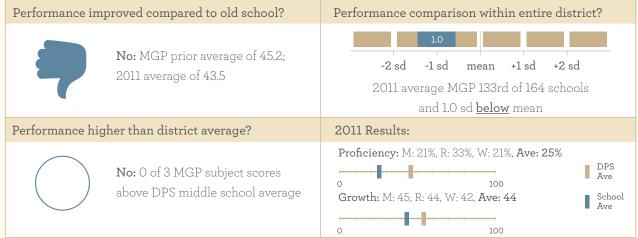


### Martin Luther King

#### Innovation School

MLK received innovation status in September of 2010, although the school went through a series of changes prior to the innovation application.

#### Middle school:

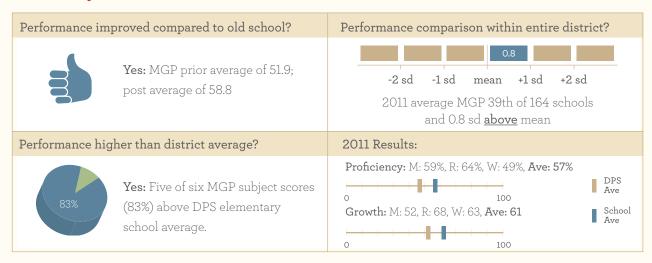


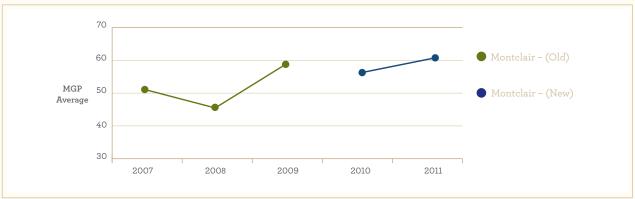


#### Montclair

#### Innovation School

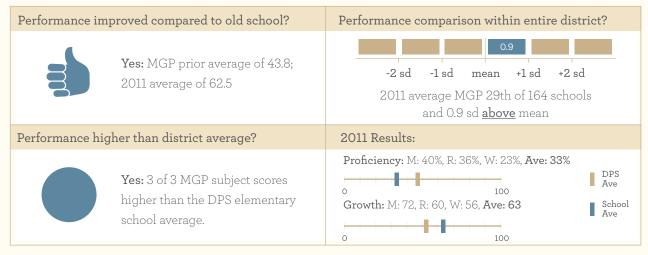
Montclair was one of Denver's first innovation proposals and secured innovation status in March of 2009.

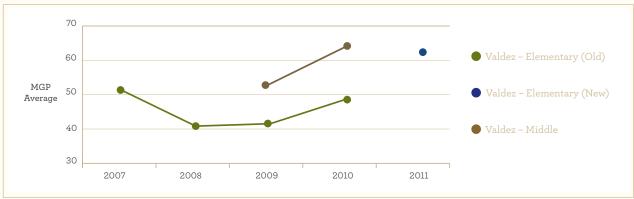




### Valdez Innovation School

Valdez extended their program from elementary school to middle school starting in the 2008-2009 school year, however school leadership then decided to close the middle school as part of their innovation application. Valdez secured innovation status in June of 2010.



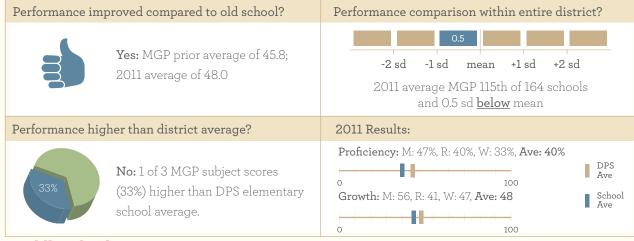


#### Whittier

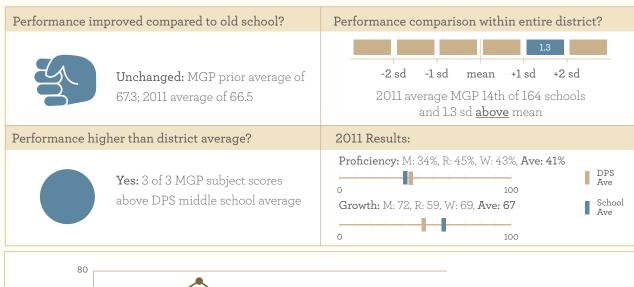
#### **Innovation School**

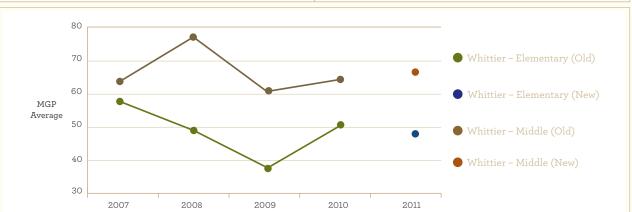
Whittier secured innovation status in September of 2010.

#### **Elementary school:**



#### Middle school:



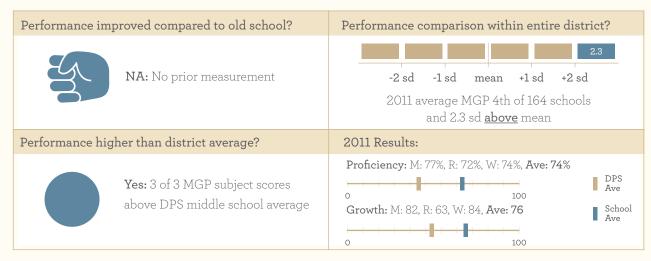


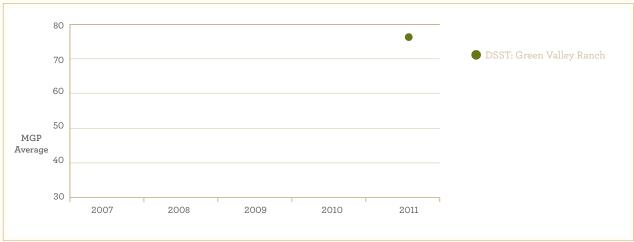
### DSST: Green Valley Ranch

#### Charter School

The third school and second facility in the DSST network, the Green Valley Ranch campus opened in 2011.

#### Middle school:

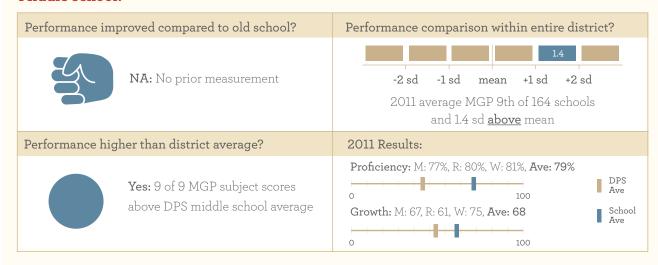


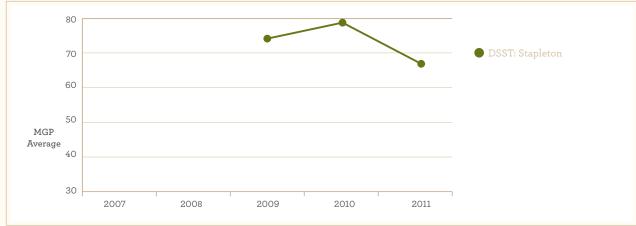


### **DSST: Stapleton**

### Charter School

DSST's original high school added a middle school to the Stapleton campus in 2009.

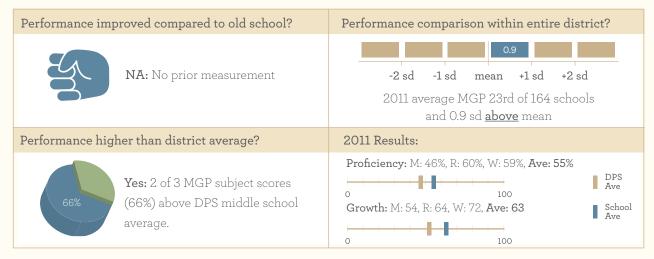


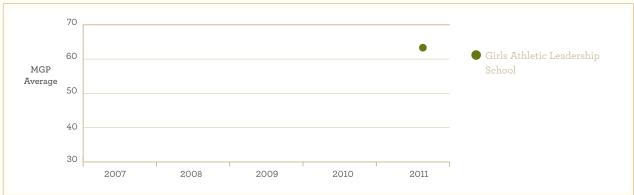


### Girls Athletic Leadership School

Charter School

GALS, which is a single-sex school for girls, opened in 2011.

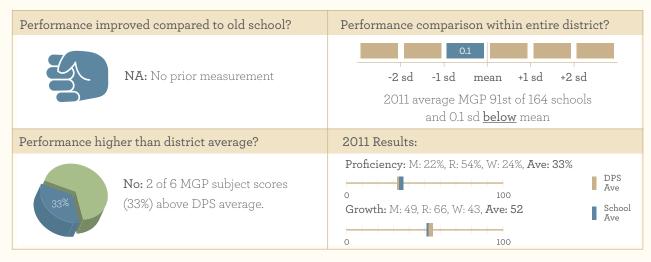


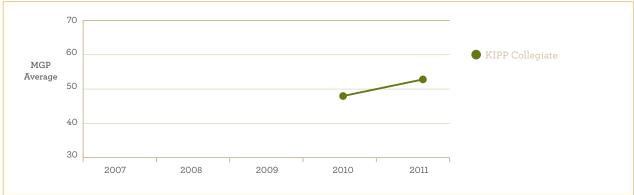


### KIPP Collegiate Charter School

KIPP opened a high school in 2010, its second school after its longstanding 5-8 middle school.

### High school:

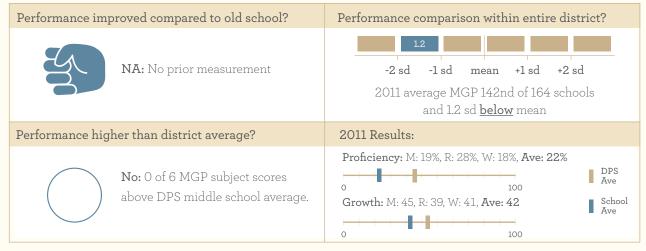


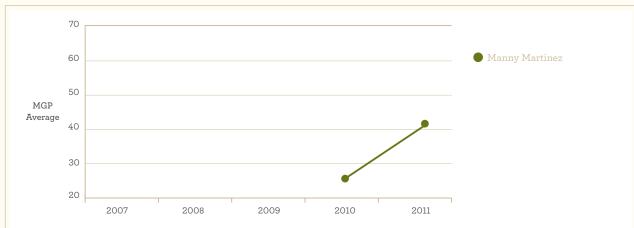


### Manny Martinez

Charter School

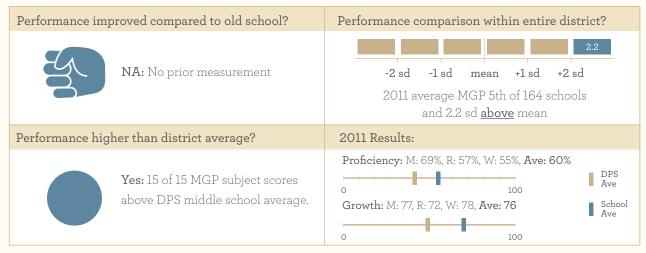
Manny Martinez opened in 2010.

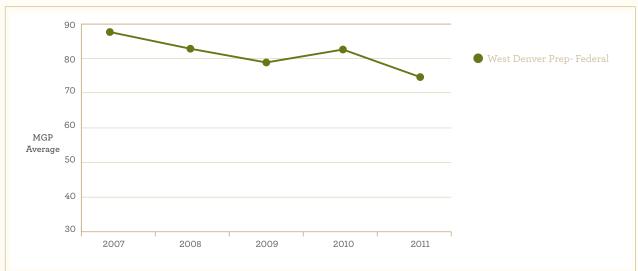




### West Denver Prep: Federal Charter School

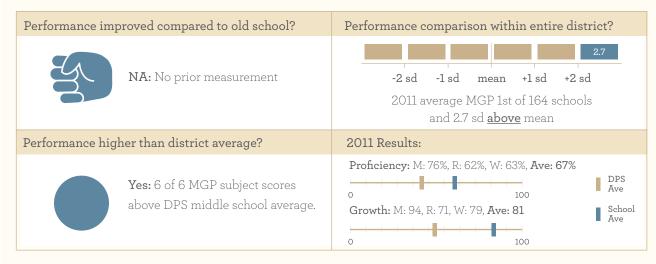
The Federal facility was West Denver Prep's initial campus, and opened in 2007.

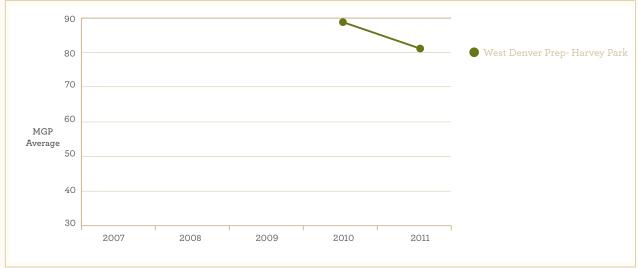




### West Denver Prep: Harvey Park Charter School

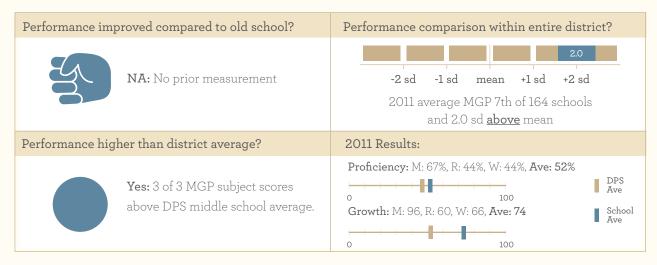
The Harvey Park campus, West Denver Prep's second school, opened in 2010.

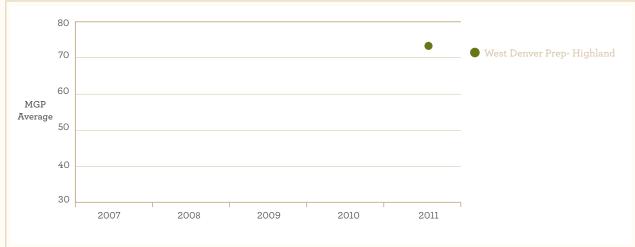




### West Denver Prep: Highland Charter School

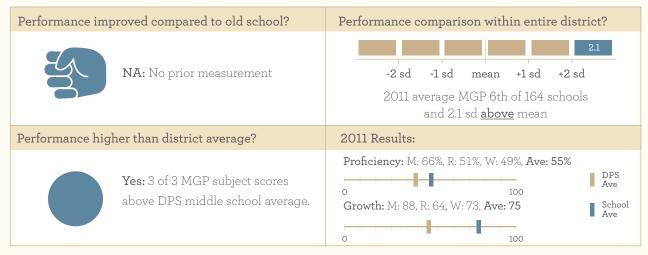
West Denver Prep's Highland campus opened in Northwest Denver in 2011.

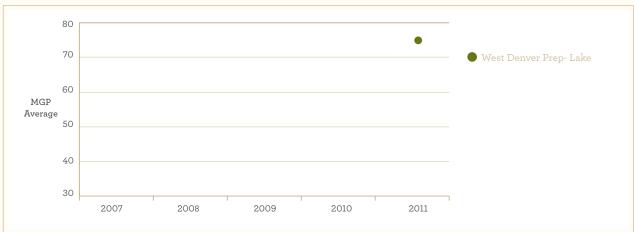




### West Denver Prep: Lake Charter School

West Denver Prep's Highland campus opened in Northwest Denver in 2011.





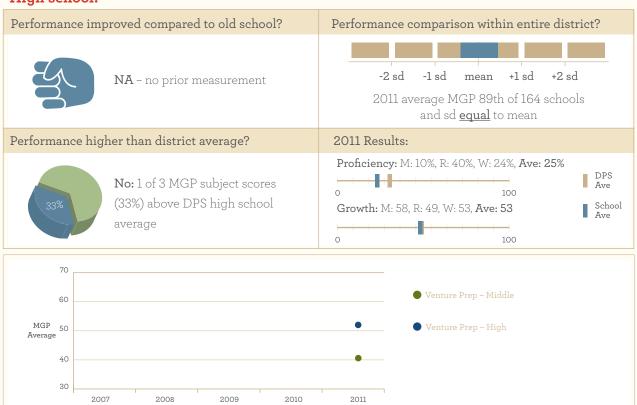
### Venture Prep Charter School

Venture Prep was formed by the merger of charter schools Denver Venture and Envision. Its first year was 2011.

#### Middle school:



#### High school:



## Appendix B: Methodology



For this paper, we looked at math, reading, and writing subject scores (and their average) median growth percentile (MGP) performance of every new school in Denver that began operations on or after the 2006-2007 school year. Since we were using MGP, we only included new schools that had at least one year of data, thus not including several new elementary schools that have yet enroll 4th grade (the first year MGP data is available). We treated different grade levels (high, middle, and elementary) as separate schools, giving us a data set of 36 total schools.<sup>13</sup>

We grouped these schools both by grades served (high, middle and elementary) and by school type (charter, innovation, and redesign). For school type, the first two categories are determined by majority approval of the Denver Board of Education, which must approve both charter applications and innovation status. For redesign schools, the criteria are more subjective, and we chose schools that had significant changes in both academic program and personnel and that had been the topic of discussion before the Denver school board.

We examined the median growth percentiles of these new schools in several ways:

- First, we examined the median growth percentile score of every new school in core subjects (reading, writing, and math) between 2007 and 2011, and compared it to the respective DPS average at a similar school level. We did so to get a sense of the overall performance of all new schools over the five-year period.
- Second, we examined how each school performed during its first, second, and third years of operation (as available) against the annual Colorado median growth percentile of 50 (which does not vary by year). We did so to see if there is a change in new school performance as a school matures and against the total peer group in Colorado.
- Third, we examined how the 32 new schools still in operation performed in the most recent year of 2011 compared to the entire district. We looked at the distribution of median growth percentile scores to see if the new schools still in existence were performing marginally, meaningfully, or substantially better (or worse) than all other DPS schools.
- Fourth, we examined the performance of the 32 schools still operating in 2011, including the 14 schools where there was a direct continuum before and after transformation through innovation status or district redesign.

A full list of schools that formed the data set follows.

<sup>&</sup>lt;sup>13</sup>We did not include North High School, which has seen such consistent and overlapping attempts to redesign it that it is virtually impossible to discretely say when these individual efforts began and what impact they had.

# Appendix C: List of DPS New Schools 2007-2011

|    | School                                      | E/M/H | Туре              | First Year |
|----|---|-------|-------------------|------------|
| 1  | Cole College Prep: A Kipp School* - 1731    | M     | Charter           | 2007       |
| 2  | West Denver Prep: Federal Campus - 8085     | M     | Charter           | 2007       |
| 3  | Gilpin Elementary School - 3426             | E     | Redesign          | 2008       |
| 4  | Manual High School - 5448                   | Н     | Innovation (3/09) | 2008       |
| 5  | Bruce Randolph School - 6350                | M     | Innovation        | 2009       |
| 6  | Bruce Randolph School - 6350                | Н     | Innovation        | 2009       |
| 7  | Cole Arts And Science Academy - 1785        | E     | Innovation (8/09) | 2009       |
| 8  | Cole Arts And Science Academy - 1785        | M     | Innovation (8/09) | 2009       |
| 9  | Denver Venture Charter School* - 2187       | Н     | Charter           | 2009       |
| 10 | DSST: Stapleton - 2185                      | M     | Charter           | 2009       |
| 11 | Place Bridge Academy - 7045                 | Е     | Redesign          | 2009       |
| 12 | Place Bridge Academy - 7045                 | M     | Redesign          | 2009       |
| 13 | Trevista Ece-8 At Horace Mann - 8909        | Е     | Redesign          | 2009       |
| 14 | Trevista Ece-8 At Horace Mann - 8909        | M     | Redesign          | 2009       |
| 15 | Valdez Elementary School* - 0408            | M     | Redesign          | 2009       |
| 16 | Greenlee K-8 School - 3638                  | Е     | Redesign          | 2010       |
| 17 | KIPP Denver Collegiate High School - 4730   | Н     | Charter           | 2010       |
| 18 | Kunsmiller Creative Arts Academy - 4795     | Е     | Redesign          | 2010       |
| 19 | Kunsmiller Creative Arts Academy - 4795     | M     | Redesign          | 2010       |
| 20 | Manny Martinez Middle School - 5430         | M     | Charter           | 2010       |
| 21 | Montclair Elementary School - 6002          | Е     | Innovation (3/09) | 2010       |
| 22 | Venture Prep (Envision)* - 2755             | M     | Charter           | 2010       |
| 23 | West Denver Prep: Harvey Park Campus - 9389 | M     | Charter           | 2010       |
| 24 | Denver Green School - 2125                  | Е     | Innovation (4/10) | 2011       |
| 25 | DSST: Green Valley Ranch - 2145             | M     | Charter           | 2011       |
| 26 | Girls Athletic Leadership School - 3639     | M     | Charter           | 2011       |
| 27 | Lake International School - 5255            | M     | Redesign          | 2011       |
| 28 | Martin Luther King Jr. Early College - 5605 | M     | Innovation (9/10) | 2011       |
| 29 | Martin Luther King Jr. Early College - 5605 | Н     | Innovation (9/10) | 2011       |
| 30 | Valdez Elementary School - 0408             | Е     | Innovation (6/10) | 2011       |
| 31 | Venture Prep - 2755                         | M     | Charter           | 2011       |
| 32 | Venture Prep - 2755                         | Н     | Charter           | 2011       |
| 33 | West Denver Prep - Highland Campus - 9336   | M     | Charter           | 2011       |
| 34 | West Denver Prep - Lake Campus - 9390       | M     | Charter           | 2011       |
| 35 | Whittier K-8 School - 9548                  | E     | Innovation (9/10) | 2011       |
| 36 | Whittier K-8 School - 9548                  | M     | Innovation (9/10) | 2011       |

# Appendix D: List of schools and median growth percentile

|                          | 11/34/11     | E        | 20   | 2007 - | - MGP   |        | 2008 | 3 - MGP        |        | 2009  | - MGP | ۵.   | 2(   | 2010 - 1   | - MGP               |       | 20     | 2011 - N | - MGP               |      |
|--------------------------|--------------|----------|------|--------|---------|--------|------|----------------|--------|-------|-------|------|------|------------|---------------------|-------|--------|----------|---------------------|------|
| School                   | E/M/H        | Type     | MATH |        | F+3     | G MATH |      | READ WRITE AVG | 3 MATH | READ  | WRITE | AVG  | MATH | READ WRITE | RITE                | AVG M | MATH R | READ WI  | WRITE               | AVG  |
| Cole College Prep: Kipp  | M            | O        | 75   | 89     | 85 75.7 | .7     |      |                |        |       |       |      |      |            |                     |       |        |          |                     |      |
| WDP - Federal            | $\mathbb{M}$ | $\circ$  | 92   | 9/     | 91 87.3 | .3 94  | f 78 | 81 84.3        | 3 90   | 99 (  | 84    | 79.8 | 92   | 9/         | 85 8                | 84.2  | 77     | 72       | 78 7                | 75.7 |
| Manual                   | 口            | Н        |      |        |         | 45     | 5 54 | 60 52.8        | 82     | 3 54  | 53    | 54.8 | 59   | 53         | 55 5                | 55.7  | 99     | 57       | 57 5                | 56.3 |
| Gilpin                   | Ш            | $\simeq$ |      |        |         | 37     | 7 33 | 35 35.0        | 0 50   | (43   | 52    | 48.3 | 51   | 20         | 50 5                | 50.3  | 99     | 44       | 52 5                | 53.7 |
| Denver Venture           | 田            | O        |      |        |         |        |      |                | 39     | 9 54  | 26    | 49.2 | 41   | 42         | 35 3                | 39.2  |        |          |                     |      |
| DSST: Stapleton          | M            | O        |      |        |         |        |      |                | 80     | 8 63  | 72    | 74.3 | 81   | 77         | 82 7                | 79.8  | 67     | 61       | 75 6                | 67.5 |
| Bruce Randolph           | $\mathbb{M}$ | Ι        |      |        |         |        |      |                | 51     | 40    | 62    | 50.8 | 52   | 54         | 47 5                | 51.0  | 46     | 42       | 36 4                | 41.3 |
| Bruce Randolph           | 田            | П        |      |        |         |        |      |                | 58     | 8 63  | 62    | 60.7 | 64   | 63         | 61 6                | 62.5  | 61     | 57       | 52 5                | 56.7 |
| CASA - Cole              | Ш            | П        |      |        |         |        |      |                | 46     | 3 46  | 53    | 48.2 | 99   | 46         | 37 4                | 46.0  | 61     | 44       | 37 4                | 47.2 |
| CASA - Cole              | $\mathbb{M}$ | Ι        |      |        |         |        |      |                | 64     | £ 51  | 65    | 0.09 | 09   |            | 9 89                | 68.0  | 69     |          | 64 6                | 62.5 |
| Place Bridge             | Ш            | K        |      |        |         |        |      |                | 32     |       | 52    | 48.5 | 29   | 55         |                     | 59.7  | 62     |          | 52 5                | 56.2 |
| Place Bridge             | $\mathbb{M}$ | $\simeq$ |      |        |         |        |      |                | 62     | 2 55  | 99    | 57.5 | 69   | 09         | 54 6                | 8.09  | 50     | 54       | 52 5                | 52.0 |
| Trevista                 | Ш            | K        |      |        |         |        |      |                | 43     | 38    | 41    | 40.7 | 800  | 30         | 47 3                | 38.3  | 48     | 40       | 51 4                | 46.3 |
| Trevista                 | $\mathbb{M}$ | K        |      |        |         |        |      |                | 45     | 64 49 | 28    | 50.5 | 51   |            | 55 5                | 52.2  | 45     | 48       | 48 4                | 47.0 |
| Valdez                   | $\mathbb{M}$ | K        |      |        |         |        |      |                | 27     | 7 54  | 78    | 52.8 | 47   |            | 9 6/                | 64.3  |        |          |                     |      |
| KIPP Collegiate          | Н            | $\circ$  |      |        |         |        |      |                |        |       |       |      | 39   | 59         | 47 4                | 48.0  |        | , 99     | 43 5                | 52.3 |
| Manny Martinez           | $\mathbb{M}$ | $\circ$  |      |        |         |        |      |                |        |       |       |      | 21   | 37         | 20 2                | 26.0  | 45     | 39       | 41 4                | 41.5 |
| Venture Prep - Envision  | $\mathbb{M}$ | $\circ$  |      |        |         |        |      |                |        |       |       |      | 37   | 40         | <b>4</b> 6 <b>4</b> | 41.0  |        |          |                     |      |
| WDP- Harvey Park         | $\mathbb{M}$ | $\circ$  |      |        |         |        |      |                |        |       |       |      | 92   | 83         | 89                  | 89.0  | 94     | 71       | 79 88               | 81.3 |
| Montclair                | Ш            | П        |      |        |         |        |      |                |        |       |       |      | 59   | 99         | 55 5                | 56.5  | 52     | 989      | 63 6                | 61.0 |
| Greenlee                 | Ш            | K        |      |        |         |        |      |                |        |       |       |      | 21   | 30         | 28 2                | 26.2  |        | 36       | 46 3                | 39.8 |
| Kunsmiller CAA           | Ш            | $\simeq$ |      |        |         |        |      |                |        |       |       |      | 41   | 38         | 43 4                | 40.7  |        | 48       | 50 5                | 53.2 |
| Kunsmiller CAA           | $\mathbb{M}$ | K        |      |        |         |        |      |                |        |       |       |      | 42   | 44         | 38 4                | 41.2  |        | 46       | 44 4                | 47.2 |
| DSST: Green Valley Ranch | $\mathbb{M}$ | $\circ$  |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 63       | 84 7                | 76.3 |
| GALS                     | $\mathbb{M}$ | $\circ$  |      |        |         |        |      |                |        |       |       |      |      |            |                     |       | 54     | . 49     | 72 6                | 63.0 |
| Venture Prep             | $\mathbb{M}$ | $\circ$  |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 40       | <b>4</b> 6 <b>4</b> | 40.3 |
| Venture Prep             | Н            | $\circ$  |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 49       | 53 5                | 52.8 |
| WDP- Highland            | M            | O        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 9 09     | <b>6</b> 6 <b>7</b> | 74.0 |
| WDP- Lake                | $\mathbb{M}$ | $\circ$  |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | . 49     | 73 7                | 75.0 |
| Denver Green School      | Ш            | Π        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 43       | 39 4                | 43.0 |
| Valdez                   | Ш            | П        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 09       | <b>9</b> 99         | 62.5 |
| MLK Early College        | $\mathbb{M}$ | Ι        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 44       | 42 4                | 43.5 |
| MLK Early College        | Н            | Ι        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       | 09     | 74       | 61 6                | 65.0 |
| Whittier                 | Ш            | П        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       | 99     | 41 ,     | 47 4                | 48.0 |
| Whittier                 | $\mathbb{M}$ | Ι        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        | 9 69     | 9 69                | 66.5 |
| Lake International       | $\mathbb{M}$ | K        |      |        |         |        |      |                |        |       |       |      |      |            |                     |       | 61     | 35       | <b>4</b> 6 <b>4</b> | 47.0 |
|                          |              |          |      |        |         |        |      |                |        |       |       |      |      |            |                     |       |        |          |                     |      |

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